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EXAMINER	
HUNG, YUBIN	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/734,480	II, YASUHIRO	
	Examiner	Art Unit	
	YUBIN HUNG	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 August 2007* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/26/07 has been entered.

Response to Amendment/Arguments

2. Claims 1-12 are still pending.

3. The replacement sheet for Fig. 4 has not been received (see paragraph 3 of the 09/20/07 Office action). Therefore the 09/20/07 objection to the drawings is maintained.

4. Applicant alleges without providing any argument that there is no disclosure (in the cited references) that the resolution of a thumbnail image is for each data file type (P. 9, 2nd paragraph, lines 1-2). However, this is not true and Applicant is referred to the analysis and rejection of claim 1 in the Office action mailed on 05/01/07.

5. Applicant further alleges there is no disclosure in the references regarding a thumbnail image being extracted from a portion of the compressed code (P. 9, 2nd paragraph, lines 2-4). However, this is a new limitation and will be addressed below in the new 35 USC 103 rejections.

6. Applicant further alleges that the *number* of thumbnails can be changed in accordance with the data file format. However, this is not a claim limitation.

Specification

7. The disclosure is objected to because of the following informalities:

- Claim 1, line 13: for clarity consider changing "select the thumbnail image" to "select the thumbnail image to be displayed". Do the same for claim 2 (at line 17)
- Claim 5, line 6: per Fig. 14 and paragraphs 74-75 of the instant application, "one of a plurality of thumbnail images" should have been "one of a plurality of resolutions". Do the same for claim 11 (at line 7)
- Claim 8, line 11: "first compressed code" (two instances) should have been "second compressed code"

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically

- Claim 1 (and similarly claims 2, 8 and all their respective dependent claims) has been amended to include, among other things, the following (see lines 6-9):

  "wherein a plurality of thumbnail images are capable of being generated from the first compressed code by extracting different portions of the first compressed code, where each of the plurality of thumbnails is associated with a different data file format"

  However, as is clear from paragraphs 78 (especially the last five lines) of the instant application, the plurality of thumbnail images are all for the same image (of a data file) but at different resolutions. Further, paragraph 74 and Fig. 13 disclose one file format per data file. Since a data file can have only one file format (e.g., spreadsheet or color image, etc., as shown in figure 14), the limitation recited above is not supported. [Note: As a result of the preceding

discussion, for examination purpose "associated with a different data file format" will be interpreted as "associated with a data file format".]

- Additionally, claim 5 (and similarly claim 11 and all their respective dependent claims) has been amended to include, among other things, the following (see lines 7-8):

  "... from the plurality of thumbnail images that may be generated for different data file formats from a compressed code related to an image"

  However, per the discussion above (regarding claim 1) as disclosed in the application each data file has only one file format. Therefore there is no support for the plurality of thumbnail images to be generated for different file formats.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1, 2, 4-6, 8, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deshpande et al. (US 7,206,804), and further in view of Blumberg (US 6,708,309) and Iwata et al. (US 7,127,673).

12. Regarding claim 2, Deshpande discloses a server computer [Fig. 1, ref. 2] causing a thumbnail image to be displayed on a display unit of a client computer [Fig. 1, refs. "client," 14 (display) in accordance with an instruction therefrom [Col. 4, lines 17-26; Fig. 8 and Col. 12, lines 11-21 (displayed thumbnail)] connected to the server via a network [Fig. 1, "network"]. Deshpande further discloses

- a thumbnail image storage unit to store in the storage unit a first compressed code relating to an image for displaying the thumbnail image of the data file,
  [Col. 11, lines 4-7 (storage unit; note that the JPEG 2000 image file is the first compressed code; note further that, while not expressly mentioned, the server necessarily has to have a storage unit in order to store the files). Col. 4, lines 17-27 (related thumbnail image). Note that the lowest-resolution version of the JPEG2000 image is a version of the thumbnail image; see also Col. 5, lines 21-28]

  the first compressed code being generated by dividing the image into a plurality of tiles and performing discrete wavelet transform and hierarchical encoding on pixel values of the image tile by tile, wherein a plurality of thumbnail images are capable of being generated from the first compressed code by extracting different portions of the first compressed code, where each of the plurality of thumbnails is associated with a data file format

  [Fig. 3; Col. 7, lines 24-52, especially lines 24-26 (dividing into tiles and coding tile by tile) and lines 47-49 (wavelet transform and hierarchical coding); Fig. 9, refs. 112 & 114 (thumbnails of different resolutions) and Col. 12, lines 11-29. Note that 112 and 114, which are different, cannot be from the same portion of the code (otherwise they would have been the same)]

- a thumbnail image extraction unit to extract a second compressed code according to the resolution acquired by the thumbnail image setting acquisition unit from the first compressed code stored in the storage unit to select the thumbnail image from the plurality of thumbnails, the second compressed code being different for different data file formats
  [Col. 4, lines 17-26 and Col. 6, lines 6-9. Note that while not recited, to *extract* and transmit the (second) compressed code stream corresponding to a thumbnail image of the requested resolution the server necessarily has to have an extraction unit. Note that if the file formats are different, then the resolutions are different (see the analysis on this feature using Blumberg and Iwata below) and therefore the corresponding second compressed codes are also different]

- a thumbnail image transmission unit to transmit the second compressed code extracted by the thumbnail image extraction unit to the client computer
  [Col. 4, lines 17-26 and Col. 6, lines 6-9. Note that while not recited, to extract and *transmit* the (second) compressed code stream corresponding to a thumbnail image of the requested resolution the server necessarily has to have a transmission unit]

While Deshpande further discloses selecting thumbnail resolution to ensure that it has sufficient detail, Deshpande does not expressly disclose the following, which is taught by Blumberg and Iwata:

- a thumbnail image setting acquisition unit to acquire from the client computer a resolution of the thumbnail image to be displayed, the resolution being set in accordance with a format type of the data file, the thumbnail image being one of the plurality of thumbnails

Blumberg discloses acquiring from the client computer a resolution of the desired image. [Fig. 1, refs. 110 (server), 120 (client) & 160 (request from user); Col. 10, lines 29-64, especially lines 49-50 and 61-64 (note that the user is on the client side and that the resolution is specified as WID and HEI). Note further that while not expressly disclosed, to generate an image with the requested specifications, including the resolution (Col. 10, lines 61-64), the server necessarily has to have a (setting acquisition) unit to obtain the requested resolution, among other information. Note further that the existence of plural thumbnails is disclosed by Deshpande as discussed earlier.]

Furthermore, Iwata discloses setting image resolution (as reflected by its size) according to the format type of the data it represents [Fig. 10, refs. S25-S28 and Col. 10, lines 1-20. Note that format types are indicated by font types].

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Deshpande with the teachings of Blumberg and Iwata as recited above. The motivation would have been for the server to be able to satisfy the request of the client,

as Blumberg indicates in Col. 10, lines 61-64, as well as to ensure that the thumbnail is readable on the screen, as Iwata indicates in Col. 10, lines 16-20.

Therefore it would have been obvious to combine Blumberg and Iwata with Deshpande to obtain the invention as specified in claim 2.

13. Claim 1 is similarly analyzed and rejected per the analysis of claim 2 since a system capable of executing the method of claim 1 has been taught.

14. Regarding claim 4, Official Notice is taken that there exists monochromatic types of images (i.e., images, such as bi-level or gray-scale images, with only a luminance component) and for such types of images the second compressed code can only be extracted from the luminance component (which is the only component) of the first compressed code.

15. Regarding claim 5, per the analysis of claim 2 the combined invention of Deshpande, Blumberg and Iwata discloses a client computer displaying a thumbnail image of an original image of data file stored in a storage unit of a server computer on a display unit, the server computer being connected to the client computer via a network.

The combined invention further discloses: (in the client computer)

- a thumbnail image setting unit to set a resolution of the thumbnail image in accordance with a format type of the data file

[Deshpande: Col. 4, lines 17-26 and Col. 6, lines 6-9. Note that while not recited, to request thumbnails of the desired resolution (the lowest or otherwise) the client necessarily has to have a setting unit. Note further that Iwata teaches format type-dependent resolution, per the analysis of claim 2]

- the format type being one of a plurality of different format types, each format type being associated with one of a plurality of thumbnail images, such that setting the resolution selects the thumbnail image from the plurality of thumbnail images that may be generated for different data file formats from a compressed code related to an image
  [Deshpande: Fig. 9, refs. 112 & 114 and Col. 12, lines 11-29 (different thumbnails that can be and are generated by setting the corresponding resolution). Per the analysis of claim 2 above, each file format is associated with a resolution (and therefore with a thumbnail image for a data file of that format because the thumbnail has that resolution). Note further that the file formats for which the thumbnail images are generated vary from image to image and therefore are different]
- a thumbnail image setting transmission unit to transmit the resolution set by the thumbnail image setting unit to the server computer
  [Deshpande: Col. 4, lines 17-26 and Col. 6, lines 6-9. Note that while not recited, to send the request for a thumbnail image of the desired resolution the client necessarily has to have a transmission unit]

16. Regarding claim 6, the combined invention further discloses

- wherein the server computer is a server computer as set forth in claim 2
  [Per the analyses of claims 2 and 5]

17. Claims 8, 10 and 11 are rejected per the analysis of their respective system claims 2, 5 and 7 since systems capable of executing the corresponding methods implemented by the programs of claims 8-12 have been taught. Note further that the server [Deshpande: Fig. 1, refs. 2 (server), 4 (hosted web pages); Col. 3, lines 31-44] clearly has a computer-readable medium.

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18. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deshpande et al. (US 7,206,804), Blumberg (US 6,708,309) and Iwata et al. (US

7,127,673) as applied to claims 1, 2, 4-6, 8, 10 and 11 above, and further in view of Koide (JP 2001-128109).

19. Regarding claim 3, the combined invention of Deshpande, Blumberg and Iwata discloses all limitations of its parent, claim 2. Per the analysis of claim 2, the combined invention of Deshpande, Blumberg and Iwata further discloses an extraction unit that extracts the second compressed code according to the resolution set in the thumbnail image setting acquisition unit from part of the first compressed code stored in the storage unit.

The combined invention of Deshpande, Blumberg and Iwata does not expressly disclose that when a region of interest (ROI) is specified with respect to the data file, the second compressed code is extracted from the part of the first compressed code relating to a tile of the ROI. However, Koide teaches using the ROI for a thumbnail image (extracted as the second compressed code, per the analysis of claim 2) [Abstract; Fig. 2, refs. S108 (specify ROI), S109 & S110 (extract/compressed thumbnail); Fig. 3; and paragraphs 009 & 026-030 of the English translation]. Note further that to be successful the ROI necessarily has to be extracted from the part of the compressed code relating to a tile of the ROI (since otherwise a wrong portion will be extracted).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combined invention of Deshpande, Blumberg and Iwata with the teaching of Koide as recited above. The motivation would have been to generate a thumbnail image with which the content of the original image is easily confirmed, as Koide indicates in lines 1-3 of the English abstract.

Therefore it would have been obvious to combine Koide with Deshpande, Blumberg and Iwata to obtain the invention as specified in claim 3.

20. Claim 9, being a medium claim of claim 3, is similarly analyzed and rejected. (See also the rejection of claim 8.)

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21. Claims 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deshpande et al. (US 7,206,804), Blumberg (US 6,708,309) and Iwata et al. (US 7,127,673) as applied to claims 1, 2, 4-6, 8, 10 and 11 above, and further in view of Moroo et al. (US 2002/0057281).

22. Regarding claim 7, the combined invention of Deshpande, Blumberg and Iwata discloses all limitations of its parent, claim 5. Deshpande further discloses

- wherein in a case of receiving from the server computer a first compressed code according to the resolution set by the thumbnail image setting unit extracted from part of a second compressed code stored in the storage unit, the thumbnail image is displayed in an enlarged size

[Fig. 9, ref. 114 and Col. 12, lines 22- 29 (thumbnail enlarged and displayed). Note that the same analysis of claim 2 discloses that the thumbnail as recited is received from the server]

- the part of the second compressed code relating to a tile of an ROI
[Per the analysis of claim 3, which is applicable here. Note that the first (respectively, second) compressed code of this claim corresponds to the second (respectively, first) compressed code of claim 3]

In addition, Moroo discloses enlarging images to be displayed (such as thumbnail images of the same format type) to a single size (namely the screen size). [P. 5, paragraph 83, lines 1- 5].

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combined invention of Deshpande, Blumberg and Iwata with the teaching of Moroo as recited above. The motivation would have been to prevent wasteful use of a display screen and display the thumbnail image in an easy-to-see condition, as Moroo indicates in P. 1, paragraph 13, lines 6-10.

Therefore it would have been obvious to combine Moroo with Deshpande, Blumberg and Iwata to obtain the invention as specified in claim 7.

23. Claim 12, being a medium claim of claim 7, is similarly analyzed and rejected. (See also the rejection of claim 8.)

Conclusion and Contact Information

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Ito et al. (US 6,967,675) – discloses downloading multiple thumbnails for displaying on the same screen
- Drucker et al. (US 7,251,790) – discloses extracting/displaying multiple thumbnails that can be of different sizes
- Anderson (US 6,020,920) discloses extracting multiple thumbnails and resizing selected ones for display

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to YUBIN HUNG whose telephone number is (571)272-7451. The examiner can normally be reached on 7:30 - 4:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew C. Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

26. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Yubin Hung
Examiner
Art Unit 2624

February 29, 2008